

# EUROPEAN PATENT OFFICE

Patent Abstracts of Japan

PUBLICATION NUMBER : 61020311  
PUBLICATION DATE : 29-01-86

APPLICATION DATE : 09-07-84  
APPLICATION NUMBER : 59140670

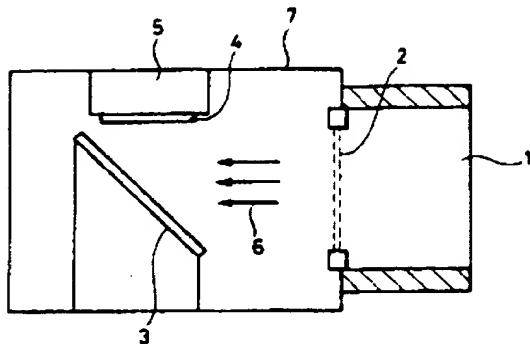
APPLICANT : NIPPON TELEGR & TELEPH CORP  
<NTT>;

INVENTOR : TOSHIMA TOMOYUKI;

INT.CL. : H01F 41/18 C22C 19/07 C23C 14/34  
H01F 10/16

TITLE : FABRICATION OF AMORPHOUS SOFT  
MAGNETIC FILM

REST AVAILABLE COPY



ABSTRACT : PURPOSE: To make magnetostriction almost zero by increasing a saturated magnetic flux density and a permialibity by fabricating a Cp-Zr-Re triple alloy amorphous soft magnetic film in which the Re content is limited by an ion beam sputtering method.

CONSTITUTION: The titled film is fabricated by ion beam sputtering method using Co-Zr-Re triple alloy including Re of 4atm% or less. Ar ion beams 6 generated by the ion gun 1 of an ion beam sputtering device are accelerated by a grid 2 and are projected to a target 3 which is arranged in a vacuum tank 7 at the predetermined angle. The target particles sputtered there are deposited on the substrate 4 which is supported by a substrate holder 5, resulting in the vapor deposition by sputtering. Then it becomes possible to obtain the film of good characteristics which has higher specific resistance, saturated magnetic flux density and permeability compared with a Co-Zr-Re amorphous alloy film formed by RF sputtering, and further in which a magnetostriction is almost zero.

COPYRIGHT: (C)1986,JPO&Japio